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C OF C

PATENT #11  
02581-P0149A WWW/HJP

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	Simon Solingen
Serial No. 09/473,502	Filing Date: December 28, 1999
Title of Application:	A Medical Instrument Having A Force-Limiting Device
Confirmation No. 1059	Group Art Unit: 3731
Examiner	Kevin Thao Truong

Commissioner for Patents  
Post Office Box 1450  
Alexandria, VA 22313-1450

ATTENTION: Decision and Certificate of Correction  
Branch of the Patent Issue Division

Certificate  
JUL 23 2003  
of Correction

***Request for Certificate of Correction  
of Patent for PTO Mistake (37 CFR 1.322(A))***

Attached in duplicate is Form PTO-1050 with at least one copy being suitable for printing.

NOTE: Form PTO-1050, using the column and line number in the printed patent, should be used exclusively regardless of the length or complexity of the subject matter. MPEP §1485.

NOTE: The patent grant should be retained by the patentee. The PTO does not attach the certificate of correction to the patentee's copy of the patent. The patent grant will be returned to the patentee if submitted. MPEP §1485.

The exact page and line number where the errors are shown correctly in the application file are:

NOTE: This information should be identified in this request, however, on Form PTO-1050, only the column and line number in the printed patent should be used. MPEP §1485.

Page 1, Title, should be, "A Medical Instrument Having A Force-Limiting Device" as amended December 26, 2002 (A). Also, see enclosed copy of "Notice of Allowance with correct title (B).

JUL 23 2003

Certificate of Mailing: I hereby certify that this correspondence is today being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner for Patents; Post Office Box 1450; Alexandria, VA 22313-1450.

July 15, 2003

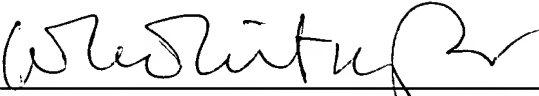
  
Susan K. Drammeh

Page two  
Patent No. 6,589,259  
Request for Certificate of Correction

Please send the Certificate to:

Name: Wesley W. Whitmyer, Jr., Esquire  
Address: ST.ONGE STEWARD JOHNSTON & REENS LLC  
986 Bedford Street  
Stamford, Connecticut 06905

Respectfully submitted,



---

Wesley W. Whitmyer, Jr., Registration No. 33,558  
Hyun Jong Park, Limited Recognition  
Attorneys for Applicant  
ST.ONGE STEWARD JOHNSTON & REENS LLC  
986 Bedford Street  
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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,589,259<sup>B1</sup>  
DATED : July 8, 2003  
INVENTOR : Simon Solingen

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

*Title page, item (54), Title, should read:*

~~Page 4,~~

(54) A MEDICAL INSTRUMENT HAVING A FORCE-LIMITING DEVICE

Mailing Address Of Sender:

Patent No.: 6,589,259

Certificate of Correction (PTO Form 1050) - Amended

JUL 23 2003

Wesley W. Whitmyer, Jr., Esquire  
ST.ONGE STEWARD JOHNSTON & REENS LLC  
986 Bedford Street  
Stamford, Connecticut 06905-5619

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,589,259 B1  
DATED : July 8, 2003  
INVENTOR(S) : Simon Solingen

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

Item [54], Title, should read:

-- [54] **A MEDICAL INSTRUMENT HAVING A FORCE-LIMITING DEVICE** --.

Signed and Sealed this

Thirtieth Day of September, 2003

A handwritten signature in black ink, appearing to read "James E. Rogan", with a horizontal line drawn underneath it.

JAMES E. ROGAN  
*Director of the United States Patent and Trademark Office*



PATENT  
02581-P0149A WWW/HJP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	Simon Solingen
Serial No. 09/473,502	Filing Date: December 28, 1999
Title of Application:	Medical Instrument, Particularly A Surgical Instrument
Confirmation No. 1059	Group Art Unit: 3731
Examiner	Kevin Thao Truong

Assistant Commissioner for Patents  
Washington, DC 20231

**Response to Official Action**

Dear Sir:

In response to the Official Action of September 25, 2002, Applicant submits the following Amendment and Remarks.

**Amendment Revisions**

**Clean Version of Each Replacement Paragraph/Section/Claim**

**Mailing Certificate:** I hereby certify that this correspondence is today being deposited with the U.S. Postal Service as *First Class Mail* in an envelope addressed to: Commissioner for Patents and Trademarks; Washington, DC 20231.

December 26, 2002

  
Susan K. Drammeh

**In the Specification:**

Please replace page 1 with the following, including substitution of the title of the invention:

**A MEDICAL INSTRUMENT HAVING A FORCE-LIMITING DEVICE**

**Background of the Invention**

The invention relates to a medical instrument, particularly a surgical instrument with a displaceable push/pull rod arranged on the proximal end of a hand manipulator for activating remote tool parts on the distal end, wherein a force-limiting device is envisaged for limiting the transmission of force from the hand manipulator onto the remote tool parts via the push/pull rod.

**Field of the Invention**

This kind of medical instrument can for example be a needle holder, a gripping-, holding- or preparation tool, scissors or other instrument, in which the push/pull rod can be moved back and forth using manual force via the hand manipulator, in order to move, i.e. to open and close, the remote tool parts which are predominantly open-ended tool parts.

**Description of the Related Art**

These known medical instruments available in various embodiment configurations have a long hollow cylindrical shaft, onto the distal end of which the remote tool parts are arranged. The hand manipulator with a rigid handle element and a swivelling handle element is arranged on the proximal end of the shaft. To activate the remote tool parts via the hand manipulator, the remote tool parts and the swivelling handle element of the hand manipulator are coupled via the push/pull rod which is

located in the hollow cylindrical shaft. In this way it is possible to open and close the remote tool parts by counter-adjusting.

Please replace page 3 with the following:

In order to avoid undue excess forces being exerted onto the push/pull rod via the hand manipulator and therefore onto the remote tool parts, a force-limiting device is known in the practical field in which the transmission of force between the hand manipulator and the push/pull forces and/or the remote tool parts is limited by a force-limiting device. This type of force-limiting device is known for example from DE 197 31 453-C2. With this known device the push/pull rod is designed as a two-piece component, in which both the push/pull rod sections are connected to one another by way of a force-limiting device. One section of the rod is designed with a casing comprising an internal steepening flat body wedge across the direction of movement of the push/pull rod. The other rod section has a tapered cone with a corresponding flat body wedge of the casing upon being subjected to tensile pressure of the push/pull rod, through which a portion of the closing force generated is absorbed, so that no further undue excess pressure can be exerted onto the remote tool parts.

In accordance with another known embodiment configuration the force-limiting device is designed as a spring assembly on the proximal end of the push/pull rod and which absorbs a portion of the force transmitted onto the push/pull rod via the hand manipulator.

All these state of the art known force-limiting devices have indeed proven themselves in practice, however their construction is very complicated and time consuming and therefore expensive.

Summary Of The Invention

Moving on from this the invention is based on the exercise of improving a medical instrument of the above mentioned...

Please replace page 5 with the following:

...the undulating force-limiting device are offset at 90° or 135° from one another.

The spring-like elasticity of the push/pull rod can in one configuration of the invention be adjusted through its shape and the number of undulatory curves go that it is possible for the force-limiting device to be adapted to the respective necessary and appropriate closing pressure.

A second embodiment configuration of the invention suggests that the push/pull rod be designed with at least sectional turned spiral coils to provide the spring-like elasticity. Along with the creation of the undulatory curves, the spiral coil configuration of the push/pull rod offers the opportunity for the push/pull rod to flexibly elongate itself in the event of excess tensile pressure.

With this embodiment configuration the spring-like elasticity of the push/pull rod is preferably adjusted through the gradient of the turned spiral coil sections, in which the turned spiral coil sections preferably have a large gradient.

Finally the invention suggests that the spring-like elasticity of the push/pull rod can be adjusted by way of the material used for the push/pull rod.

Further, for technical and production reasons as well as for increasing operational safety, it is suggested that the push/pull rod be made of one uniform piece of material and/or with a virtually constant cross section.



### Brief Description Of The Drawings

Further characteristics and advantages of the invention can be extracted from the following description of the associated diagram, in which the one embodiment configuration for creating a force-limiting device for a...

Please replace page 6 with the following:

...medical instrument according to the invention is depicted. The diagrams show:

- Fig 1 is a side view of a surgical instrument according to the invention in the form of a gripping tool.
- Fig 2 a side view of a force-limiting device of a medical instrument per Fig 1 with undulatory curved sections, and
- Fig 2b a side view of the force-limiting device per Fig 2a, however rotated 90°.

### Detailed Description Of The Invention

Fig 1 depicts a surgical instrument in the form of a gripping tool 1. The gripping tool 1 has a hollow cylindrical shaft 2 along its lateral length, on the proximal end of which a hand manipulator 3 is located, and on the distal end of which remote tool parts 4 are arranged in the form of two open-ended sections and which can be activated via the hand manipulator 3 of the gripping tool 1.

The remote tool parts 4 are designed so that one remote tool part 4a is rigidly connected to the shaft 2, whilst the other remote tool part 4b is located and can swivel on an axis 5 across from the rigid remote tool part 4a. Understandably it is also possible for both remote tool parts 4 to be designed to swivel.

The hand manipulator 3 for activating the remote tool parts 4 has two handle elements 3a and 3b which swivel on hinge axes 6 across from the shaft 2.

The connection between the hand manipulator 3 - more precisely the swivelling handle elements 3a and 3b of the hand manipulator 3 - and the swivelling remote tool parts...

**In the Claims:**

Please amend claims 1-12 as follows:

1. (Amended) A medical instrument comprising a push/pull rod displaceable by a hand manipulator arranged on a proximal end of said push/pull rod for activating remote tool parts at a distal end of said push/pull rod, said medical instrument further comprising a force-limiting device envisaged for limiting the transmission of force onto said remote tool parts from said hand manipulator via said push/pull rod, wherein said push/pull rod itself is designed to form said force-limiting device having spring-like elasticity along the line of displacement.
2. (Amended) A medical instrument according to claim 1, wherein said push/pull rod is designed to have at least sectional undulatory curves to provide said spring-like elasticity.
3. (Amended) A medical instrument according to claim 2, wherein said individual sections with the undulatory curves are designed on planes offset from one another.
4. (Amended) A medical instrument according to claim 3, wherein said individual sections with the undulatory curves are each designed on planes offset at 90° from one another.
5. (Amended) A medical instrument according to claim 2, wherein said individual semi-curves of said sections with the undulatory curves are designed to be offset at 90° or 135° from one another.
6. (Amended) A medical instrument according to claim 2, wherein the spring-like elasticity of said push/pull rod can be adjusted through its shape and/or the number of the undulatory curves.

7. (Amended) A medical instrument according to claim 1, wherein said push/pull rod is designed with at least turned spring coil sections to provide the spring-like elasticity.
8. (Amended) A medical instrument according to claim 7, wherein the spring-like elasticity of said push/pull rod can be adjusted through the gradient of said turned spring coil sections.
9. (Amended) A medical instrument according to claim 7, wherein said turned spring coil sections have a large gradient.
10. (Amended) A medical instrument according to claim 1, wherein the spring-like elasticity of said push/pull rod can be adjusted via the material of said push/pull rod.
11. (Amended) A medical instrument according to claim 1, wherein said push/pull rod is made from one uniform piece of material.
12. (Amended) A medical instrument according to claim 1, wherein said push/pull rod has a virtually constant cross section.

**Remarks**

The application has been reviewed in light of the Office Action mailed September 25, 2002. By the foregoing Amendment, claims 1-12 have been amended. No new matter is introduced by the Amendment. Entry of the Amendment and favorable consideration thereof is earnestly requested.

The Examiner has objected to the specification due to certain informalities. These informalities have been corrected by the foregoing Amendment.

The Examiner has objected to claims 1-12 due to certain informalities. These informalities have been corrected by the foregoing Amendment.

The Examiner has rejected claims 1-12 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-12 have been amended to overcome this rejection.

The Examiner has rejected claims 1 and 7-12 under 35 U.S.C. §102(b) as being anticipated by Kratsch et al. (U.S. Patent No. 5,490,861).

Kratsch et al. discloses an end effector for endoscopic instruments, which includes a push rod displaceable by a hand manipulator arranged on a proximal end of the push rod for activating remote tool parts at a distal end of the push rod, and including a force-limiting device for limiting the transmission of force to said remote tool parts from said hand manipulator via the push rod.

The force-limiting device of Kratsch et al. is designed as spring coil section (12) which is arranged on the outer surface of push rod (16) (Col. 5, lines 44 47 and Fig. 2). The push rod (16) and the spring coil section (12) are coupled to one another allowing a reciprocal movement of the push rod (16) to the spring coil section (12). The

force-limiting device of the assembly known from Kratsch et al. is designed by these two elements, the push rod (16) on the one hand and the spring coil section (12) on the other hand.

Contrary to the above-described assembly of Kratsch et al., the force-limiting device of the claimed invention particularly requires that "said push/pull rod itself is designed to form said force-limiting device having spring-like elasticity along the line of displacement." (See Claim 1, together with related descriptions.) Accordingly, the medical instrument as recited in claims 1 and 7-12 is patentably distinct from Kratsch et al. Further, the invention as claimed is not obvious from Kratsch et al., because a person skilled in the art does not get any hint from Kratsch et al. to combine the push rod (16) and the spring coil section (12) in a single element to form the force-limiting device.

The Examiner has rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by Moslor et al. (U.S. Patent No. 4,122,856).

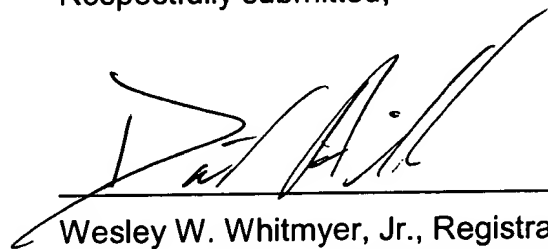
The force-limiting device known from Moslor et al. is designed as tubular sheath (16) which has a passage (17) extending there-through. An actuation rod (31) extends through this passage (117) of said sheath (116) (Col. 4, lines 22 - 24 and Fig. 3). The sheath (16) can be designed flexible so that it might be flexed or directed by a deflecting bridge used in conjunction with a cystoscope (Col. 3, lines 37 - 46).

As is similar to Kratsch et al., the force-limiting device of the instrument known from Moslor et al. is designed by an element sheath (16) (together with other members such as spring (29)) separate from the actuation rod (31), whereas the present invention claims that, said push/pull rod itself is designed to form said force-limiting device having spring-like elasticity along its longitudinal length. Accordingly, the medical instrument as recited in claim 1 is patentably distinct from Moslor et al.

Therefore, from the teaching of either Moslor et al. or Kratsch et al., and/or even in view of a combination of Kratsch and Moslor, it was not obvious for a person having ordinary skill in the art to modify a known force-limiting device in the inventive way because there cannot be found any indication in the cited prior art to combine the push/pull rod and the spring coil section or the flexible sheath in a single element to form the force-limiting device. Therefore a medical instrument according to amended patent claim 1 is patentable over the cited references.

Applicant gratefully acknowledges that the Examiner has indicated the allowability of claims 2-6 if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, as discussed above, and to include all of the limitations of the base claim and any intervening claims. Applicant respectfully submits that all of the claims currently pending in the application are now in accordance with the foregoing suggestions by the Examiner and in condition for allowance. Early notice to that effect is respectfully requested.

Respectfully submitted,



Wesley W. Whitmyer, Jr., Registration No. 33,558  
David W. Aldrich, Registration No. 51,159  
Hyun Jong Park  
Attorneys for Applicant  
ST.ONGE STEWARD JOHNSTON & REENS LLC  
986 Bedford Street  
Stamford, CT 06905-5619  
203 324-6155

JUL 23 2003

**Version with Markings to Show Changes Made**

**In the Specification:**

Please replace page 1 with the following, including substitution of the title of the invention:

**A MEDICAL INSTRUMENT HAVING A FORCE-LIMITING DEVICE [A medical instrument, particularly a surgical instrument]**

**Background of the Invention**

The invention relates to a medical instrument, particularly a surgical instrument with a displaceable push/pull rod arranged on the proximal end of a hand manipulator for activating remote tool parts on the distal end, wherein a force-limiting device is envisaged for limiting the transmission of force from the hand manipulator onto the remote tool parts via the push/pull rod.

**Field of the Invention**

This kind of medical instrument can for example be a needle holder, a gripping-, holding- or preparation tool, scissors or other instrument, in which the push/pull rod can be moved back and forth using manual force via the hand manipulator, in order to move, i.e. to open and close, the remote tool parts which are predominantly open-ended tool parts.

**Description of the Related Art**

These known medical instruments available in various embodiment configurations have a long hollow cylindrical shaft, onto the distal end of which the remote tool parts are arranged. The hand manipulator with a rigid handle element and a swivelling handle element is arranged on the proximal end of the shaft. To activate



the remote tool parts via the hand manipulator, the remote tool parts and the swivelling handle element of the hand manipulator are coupled via the push/pull rod which is located in the hollow cylindrical shaft. In this way it is possible to open and close the remote tool parts by counter-adjusting.

Please replace page 3 with the following:

In order to avoid undue excess forces being exerted onto the push/pull rod via the hand manipulator and therefore onto the remote tool parts, a force-limiting device is known in the practical field in which the transmission of force between the hand manipulator and the push/pull forces and/or the remote tool parts is limited by a force-limiting device. This type of force-limiting device is known for example from DE 197 31 453-C2. With this known device the push/pull rod is designed as a two-piece component, in which both the push/pull rod sections are connected to one another by way of a force-limiting device. One section of the rod is designed with a casing comprising an internal steepening flat body wedge across the direction of movement of the push/pull rod. The other rod section has a tapered cone with a corresponding flat body wedge, which is located inside the casing of the first rod section. The casing is designed with slots which are expanded by the displaceable tapered cone along the flat body wedge of the casing upon being subjected to tensile pressure of the push/pull rod, through which a portion of the closing force generated is absorbed, so that no further undue excess pressure can be exerted onto the remote tool parts.

In accordance with another known embodiment configuration the force-limiting device is designed as a spring assembly on the proximal end of the push/pull rod and which absorbs a portion of the force transmitted onto the push/pull rod via the hand manipulator.

All these state of the art known force-limiting devices have indeed proven themselves in practice, however their construction is very complicated and time consuming and therefore expensive.

### Summary Of The Invention

Moving on from this the invention is based on the exercise of improving a medical instrument of the above mentioned...

Please replace page 5 with the following:

...the undulating force-limiting device are offset at 90° or 135° from one another.

The spring-like elasticity of the push/pull rod can in one configuration of the invention be adjusted through its shape and the number of undulatory curves so that it is possible for the force-limiting device to be adapted to the respective necessary and appropriate closing pressure.

A second embodiment configuration of the invention suggests that the push/pull rod be designed with at least sectional turned spiral coils to provide the spring-like elasticity. Along with the creation of the undulatory curves, the spiral coil configuration of the push/pull rod offers the opportunity for the push/pull rod to flexibly elongate itself in the event of excess tensile pressure.

With this embodiment configuration the spring-like elasticity of the push/pull rod is preferably adjusted through the gradient of the turned spiral coil sections, in which the turned spiral coil sections preferably have a large gradient.

Finally the invention suggests that the spring-like elasticity of the push/pull rod can be adjusted by way of the material used for the push/pull rod.

Further, for technical and production reasons as well as for increasing operational safety, it is suggested that the push/pull rod be made of one uniform piece of material and/or with a virtually constant cross section.

#### Brief Description Of The Drawings

Further characteristics and advantages of the invention can be extracted from the following description of the associated diagram, in which the one embodiment configuration for creating a force-limiting device for a...

Please replace page 6 with the following:

...medical instrument according to the invention is depicted. The diagrams show:

- Fig 1 is a side view of a surgical instrument according to the invention in the form of a gripping tool.
- Fig 2 a side view of a force-limiting device of a medical instrument per Fig 1 with undulatory curved sections, and
- Fig 2b a side view of the force-limiting device per Fig 2a, however rotated 90°.

#### Detailed Description Of The Invention

Fig 1 depicts a surgical instrument in the form of a gripping tool 1. The gripping tool 1 has a hollow cylindrical shaft 2 along its lateral length, on the proximal end of which a hand manipulator 3 is located, and on the distal end of which remote tool parts 4 are arranged in the form of two open-ended sections and which can be activated via the hand manipulator 3 of the gripping tool 1.

The remote tool parts 4 are designed so that one remote tool part 4a is rigidly connected to the shaft 2, whilst the other remote tool part 4b is located and can swivel

on an axis 5 across from the rigid remote tool part 4a. Understandably it is also possible for both remote tool parts 4 to be designed to swivel.

The hand manipulator 3 for activating the remote tool parts 4 has two handle elements 3a and 3b which swivel on hinge axes 6 across from the shaft 2.

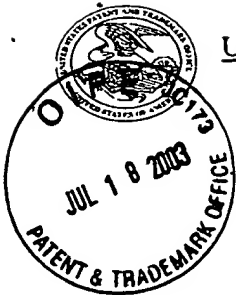
The connection between the hand manipulator 3 - more precisely the swivelling handle elements 3a and 3b of the hand manipulator 3 - and the swivelling remote tool parts...

**In the Claims:**

Please amend claims 1-12 as follows:

1. (Amended) A medical instrument [, particularly a surgical instrument,] comprising [with] a push/pull rod displaceable by a hand manipulator arranged on a [the] proximal end of said push/pull rod for activating remote tool parts at a [the] distal end of said push/pull rod, said medical instrument further comprising [wherein] a force-limiting device [is] envisaged for limiting the transmission of force onto said [the] remote tool parts from said [the] hand manipulator via said [the] push/pull rod, wherein [characterized in that] said push/pull rod itself is designed to form said force-limiting device having spring-like elasticity along the line of displacement [for creating the force-limiting device the push/pull rod is designed to have spring-like elasticity along its lateral length].
2. (Amended) A medical instrument according to claim 1, [characterized in that the] wherein said push/pull rod is designed to have [has] at least sectional undulatory curves to provide said [the] spring-like elasticity.
3. (Amended) A medical instrument according to claim 2, [characterized in that the] wherein said individual sections with the undulatory curves are designed on planes off-set from one another.

4. (Amended) A medical instrument according to claim 3, [characterized in that the] wherein said individual sections with the undulatory curves are each designed on planes offset at 90° from one another.
5. (Amended) A medical instrument according to claim 2, [characterized in that the] wherein said individual semi-curves of said [the] sections with the undulatory curves are designed to be offset at 90° or 135° from one another.
6. (Amended) A medical instrument according to claim 2, [characterized in that] wherein the spring-like elasticity of said [the] push/pull rod can be adjusted through its shape and/or the number of the undulatory curves.
7. (Amended) A medical instrument according to claim 1, [characterized in that the] wherein said push/pull rod is designed with at least turned spring coil sections to provide the spring-like elasticity.
8. (Amended) A medical instrument according to claim 7, [characterized in that] wherein the spring-like elasticity of said [the] push/pull rod can be adjusted through the gradient of said [the] turned spring coil sections.
9. (Amended) A medical instrument according to claim 7, [characterized in that the] wherein said turned spring coil sections have a large gradient.
10. (Amended) A medical instrument according to claim 1, [characterized in that] wherein the spring-like elasticity of said [the] push/pull rod can be adjusted via the material of said [the] push/pull rod.
11. (Amended) A medical instrument according to claim 1, [characterized in that the] wherein said push/pull rod is made from one uniform piece of material.
12. (Amended) A medical instrument according to claim 1, [characterized in that the] wherein said push/pull rod has a virtually constant cross section.



UNITED STATES PATENT AND TRADEMARK OFFICE

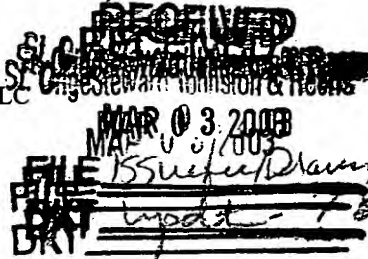
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WIP 2581-P149A

NOTICE OF ALLOWANCE AND FEE(S) DUE

WESLEY W WHITMYER JR  
ST ONGE STEWARD JOHNSTON & REENS LLC  
986 BEDFORD STREET  
STAMFORD, CT 069055619

7590 02/27/2003



EXAMINER	
TRUONG, KEVIN THAO	
ART UNIT	CLASS-SUBCLASS
3731	606-170000
DATE MAILED: 02/27/2003	

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,502	12/28/1999	SIMON SOLINGEN	02581-P0149A	1059

TITLE OF INVENTION: MEDICAL INSTRUMENT HAVING A FORCE-LIMITING DEVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1300	\$0	\$1300	05/27/2003

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
- ☐ Applicant claims SMALL ENTITY status.  
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.



UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office  
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Washington, D.C. 20231  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,502	12/28/1999	SIMON SOLINGEN	02581-P0149A	1059

7590 02/27/2003

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STAMFORD, CT 069055619



EXAMINER
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TRUONG, KEVIN THAO

ART UNIT	PAPER NUMBER
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3731

DATE MAILED: 02/27/2003

**Determination of Patent Term Extension under 35 U.S.C. 154 (b)**  
(application filed after June 7, 1995 but prior to May 29, 2000)

The patent term extension is 0 days. Any patent to issue from the above identified application will include an indication of the 0 day extension on the front page.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (<http://pair.uspto.gov>)

Any questions regarding the patent term extension or adjustment determination should be directed to the Office of Patent Legal Administration at (703)305-1383.



# Notice of Allowability

Application No.

09/473,502

Examiner

Kevin T. Truong

Applicant(s)

SOLINGEN, SIMON

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendt. 12/31/2002.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☒ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS must be submitted.
  - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☒ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

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|--|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)  | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____    |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | 6 <input type="checkbox"/> Examiner's Amendment/Comment                    |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9 <input type="checkbox"/> Other   |

Kevin T. Truong  
Primary Examiner  
Art Unit: 3731

2/20/03